

Remarks

Reconsideration and allowance of the subject patent application are respectfully requested.

All of the independent claims call for controlling the packets stored in the receiving buffer "by their number". By way of example without limitation, the subject application discloses at page 13, line 21 to page 14, line 4:

...Use of a packet processor of the present invention provides a simple method which can realize receiving buffer control for reproducing data such as voice sound, music etc., in an optimal way by absorbing packet jitter which varies over time depending on the network status. Since none of the temporal information from the transmitting side, which has been used in the conventional configuration, is used in the packet processor of the present invention, the optimal control can be achieved on the receiving side only.

See also page 23, lines 14-22. While not acquiescing in the various rejections or characterizations of the applied references in the office action, the independent claims have been amended to specify that packets are controlled by their number without using temporal information received with the packets. As discussed below, the applied references do not disclose or suggest controlling packets in this manner.

Claims 19, 21, 22, 27, 28, 31, 33, 34, 39 and 40 were rejected under 35 U.S.C. Section 103(a) as allegedly being "obvious" over Pogrebinsky et al. (U.S. Patent Publication No. 2002/0101855) in view of Haskell et al. (U.S. Patent No. 5,287,182).

Pogrebinsky et al. discloses methods and apparatus that detect burst periods from network activity and analyze the requisite burst periods to determine the likelihood of a subsequent burst period. Jitter buffer size is adjusted based on the determined likelihood of the subsequent burst period. As a result of this method, jitter buffer size is adjusted proactively, based on the likelihood of burst periods. With reference to Figure 5, the jitter buffer size is determined based on TTP (time-to-play) statistics which involve packet size estimations based on time stamps accompanying received packets. See Pogrebinsky et al., paragraph [0032] and paragraphs [0034]-[0046]. Consequently, Pogrebinsky et al. does not disclose or suggest controlling packets in a buffer by their number without using temporal information received with the packets as claimed.

Haskell et al. discloses that underflow of receiver data buffers can be alleviated by using a jitter delay (Dj) which causes an extra accumulation of data in the data buffers prior to decoding. With reference to Figure 4 of Haskell et al., the determination of the jitter delay involves use of system clock reference (SCR) values extracted from received pack headers. See Haskell et al., Figure 4; col. 3, lines 43-53; col. 4, lines 18-22; and col. 6, lines 15-35. Consequently, Haskell et al. does not disclose or suggest controlling packets in a buffer by their number without using temporal information received with the packets as claimed.

Because both Pogrebinsky et al. and Haskell et al. are deficient with respect to the claimed controlling feature, the proposed combination of these references is likewise deficient in this regard.

Moreover, claims 21, 22, 27, 28, 33, 34, 39 and 40 each requires two modifications. First, the reference value for the number of received packets at which reproduction of data is started is modified, for example, when the data in the buffer is used up or when the data exceeds a predetermined buffer size. Second, the receiving buffer size and the reference value are modified, for example, when the monitored the number of packets increases or decreases with time or when modifications of one type successively occur. Neither Pogrebinsky et al. nor Haskell et al. discloses or suggests such modifications. For these additional and independent reasons, claims 21, 22, 27, 28, 33, 34, 39 and 40 patentably distinguish over these references.

Moreover, with respect to claims 27, 28, 39 and 40, the applied references do not disclose or suggest recording modifications over time and modifying the receiving buffer size based on these records. Pogrebinsky et al. is acknowledged on page 6 of the office action as not disclosing this feature and reference is made to Haskell et al. in this regard. However, Haskell et al.'s adjustment of the jitter delay value, Dj, based on monitored data is not the same as, and is not suggestive of, adjusting the buffer size. See, e.g., Haskell et al., col. 5, lines 46-52). For these additional and independent reasons, claims 27, 28, 39 and 40 patentably distinguish over Pogrebinsky et al. and Haskell et al.

Claims 20 and 32 were rejected under 35 U.S.C. Section 103(a) as allegedly being "obvious" over Pogrebinsky et al. in view of Haskell et al., and further in view of Ohlsson et al. (U.S. Patent No. 6,452,950).

Ohlsson et al. describes varying the size of a jitter buffer based on an estimated variation of packet transmission delay derived from the times of arrival of packets stored in the buffer. Ohlsson et al. does not disclose or suggest controlling packets in a buffer by their number without using temporal information received with the packets as claimed and thus does not remedy the above-noted deficiencies of Pogrebinsky et al. and Haskell et al. in at least this regard. Consequently, even assuming for the sake of argument that Ohlsson et al. were for some reason shown to be properly combinable with Pogrebinsky et al. and Haskell et al., the controlling of packets as claimed in claims 20 and 32 would not result from any such combination.

Claims 23, 25, 26, 29, 30, 35, 37, 38, 41 and 42 were rejected under 35 U.S.C. Section 103(a) as allegedly being "obvious" over Pogrebinsky et al. in view of Haskell et al., and further in view of Cloutier (U.S. Patent No. 5,966,387).

Cloutier discloses jitter buffer adjustment based on PCR values in received data. Note, for example, claim 1 of Cloutier which calls for a time stamp detector that detects time stamp values located within a transport stream in the context of measuring jitter. Cloutier et al. does not disclose or suggest controlling packets in a buffer by their number without using temporal information received with the packets as claimed and thus does not remedy the above-noted deficiencies of Pogrebinsky et al. and Haskell et al. in at least this regard. Consequently, even assuming for the sake of argument that Cloutier et al. were for some reason shown to be properly combinable with Pogrebinsky et al. and Haskell et al., the controlling of packets as claimed in claims 23, 25, 26, 29, 30, 35, 37, 38, 41 and 42 would not result from any such combination.

Moreover, with respect to claims 29, 30, 41 and 42, the applied references do not disclose or suggest modifying a clock for data reproduction based on whether modifications of one type (e.g., the reference value or a receiving buffer size) successively occur. Cloutier is referenced on page 9 of the office action with respect to modifying the clock. However, Cloutier describes that the output clock signal (OC) is changed if the detection processor 128 determines the presence of jitter. See, e.g., Cloutier, col. 13, lines 43-47. This is not the same as, and is not suggestive of, modifying a clock based on successive occurrences of modifications of one type as claimed. For these additional and independent reasons, claims 29, 30, 41 and 42 patentably distinguish over the proposed combination of Pogrebinsky et al., Haskell et al. and Cloutier et al.

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Claims 24 and 36 were rejected under 35 U.S.C. Section 103(a) as allegedly being "obvious" over Pogrebinsky et al. in view of Haskell et al. and Ohlsson et al., and further in view of Cloutier. As noted above, none of these document discloses or suggest controlling packets in a buffer by their number without using temporal information received with the packets and thus the combination of these references is deficient with respect to claims 24 and 36 in at least this regard.

New claims 43 and 44 are added. The subject matter of these new claims is based on the originally-filed disclosure and no new matter is added. Claims 43 and 44 each requires, among other things, a controller that controls packets stored in the receiving buffer by their number without using temporal information received with the packets. Consequently, claims 43 and 44 are believed to patentably distinguish over the applied references for the reasons stated above.

The pending claims are believed to be allowable and favorable office action is respectfully requested.

Respectfully submitted,

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